

9498.1994(11)

United States Environmental Protection Agency  
Washington, D.C. 20460  
Office of Solid Waste and Emergency Response

Nov. 4, 1994

Mr. James W. Hathcock  
Environmental Manager  
Laidlaw Environmental Services (Recovery), Inc.  
2029 Bayou Plaquemine Road  
Rayne, Louisiana 70578

Dear Mr. Hathcock:

Thank you for your letter of August 23, 1994, regarding the minimum heat content requirements of waste-derived fuel blended for energy recovery in boilers and industrial furnaces (BIFs). Specifically, Laidlaw proposes to lower the minimum heat content requirement for hazardous waste accepted at its Crowley, Louisiana facility from 5,000 Btu/lb to 4,000 Btu/lb for wastes with "significant organic content." Your letter also serves as a follow-up to a previous Environmental Protection Agency (EPA) memorandum to EPA Region VI dated May 20, 1994, on a related subject.

In a letter to EPA Region VI dated October 19, 1993, Laidlaw proposed to lower the minimum heat content requirement for wastes it accepts for blending into fuel for energy recovery from 5,000 Btu/lb to 1,000 Btu/lb provided the BIF unit has certified compliance with the BIF rules. EPA responded in a May 20, 1994, letter stating that blending of hazardous waste to increase its heating value for use as a fuel in BIF is not prohibited; however, if an industrial furnace burns a listed hazardous waste with an as-generated heating value less than 5,000 Btu/lb and the facility does not document that the waste is burned for legitimate energy recovery, then any product applied to or placed on the land in a manner that constitutes disposal (e.g., cement) would be a waste-derived product subject to regulation as hazardous waste.

You now indicate that Laidlaw has developed a comprehensive list of 386 EPA hazardous waste codes that are considered to have "significant organic content." You also note that many of these

waste streams have a land disposal restrictions (LDR) treatment standard of incineration or fuels substitution. You contend that these waste streams (with an as-generated heating value between 4,000 Btu/lb and 5,000 Btu/lb) are suitable for their fuel blending program due to the wastes' "significant organic content." Though not specifically mentioned, EPA must infer that Laidlaw intends to send these blended wastes to industrial furnaces that produce a product applied to or placed on the land in a manner constituting disposal (i.e., cement or light-weight aggregate) and are concerned about the waste-derived product implications.

The Agency presumes that a hazardous waste with an as-generated heating value greater than 5,000 Btu/lb is burned in an industrial furnace for energy recovery. Documentation that a waste has a heating value greater than 4,000 Btu/lb and "significant organic content" is not, by itself, adequate to rebut the presumption that it being burned for destruction rather than for energy recovery. As indicated in the May 20 memorandum, an industrial furnace may burn a waste with an as-generated heating value less than 5,000 Btu/lb and avoid waste-derived product implications only if the facility documents that the lower heating value waste contributes substantial, useable energy to the furnace. Documentation could be provided by, for example, empirical data showing that substitution of a lower heating value waste results in a substantial reduction in fuel (e.g., coal) usage that would otherwise be consumed. Other approaches may also be used to demonstrate that low heating values waste contributed significant energy input to the furnace. However, facilities should discuss their approach(es) to document that lower heating value wastes are being burned for legitimate energy recovery with the appropriate permitting agency to be sure that it is acceptable.

I hope this information will be helpful. If you have any further questions or comments, please contact Frank Behan of my staff at 703-308-8476.

Sincerely yours,  
Michael Shapiro, Director  
Office of Solid Waste

cc: William Honker, Region V (6H-P)

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Attachment

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LAIDLAW ENVIRONMENTAL SERVICES  
2029 Bayou Plaquemine Road  
Rayne, Louisiana 70578

August 23, 1994

Mr. Michael H. Shapiro, Director  
Office of Solid Waste  
401 M Street, SW  
Washington, DC 20460

Re: BTU Limitation for Waste-Derived Fuels Laidlaw  
Environmental Services (Recovery), Inc., Crowley, LA -  
LAD 079 464 095

Dear Mr. Shapiro:

The purpose of this letter is to request clarification concerning the minimum heat content requirements of waste-derived fuel burned for energy recovery in boilers and industrial furnaces (BIF's) and as a follow-up to your memorandum, dated May 20, 1994. As of August 21, 1991, Boiler and Industrial Furnace units were regulated under the Boiler and Industrial Furnace Rule (40 CFR 266). Prior to this date, BIF's were not regulated under RCRA if they were burning hazardous waste for energy recovery. The only restriction was the hazardous waste burned for energy recovery had to have a minimum heat content of 5,000 BTU/pound to avoid "sham recycling". The "Sham Recycling Rule" (Federal Register, March 16, 1983, Pg. 11,157) was intended to prevent BIF units from burning hazardous waste solely for the purpose of destruction. Under the BIF Rule, the "Sham Recycling Rule" no longer applies to BIF units once they have certified compliance with the Rule.

Laidlaw Environmental Services (Recovery), Inc., operates a hazardous waste fuel blending facility in Crowley, Louisiana. At the current time, Laidlaw Environmental Services (Recovery), Inc., does not accept hazardous waste with a heat content less than 5,000 BTU/pound. The facility proposes to lower the minimum heat content requirement for hazardous waste fuels accepted at the facility to 4,000 BTU/pound for materials with "significant organic content". These materials would not be blended and shipped to BIF units,

which have not certified compliance with the BIF Rule. A list of the EPA Hazardous Waste Codes, which Laidlaw considers to have "significant organic content", are listed in Table 1. A description of the additional acceptance criteria, which will be utilized by the facility, for the acceptance of hazardous waste with heating values between 4,000 BTU/pound and 5,000 BTU/pound is provided in Attachment A.

Laidlaw contends the materials with a heat content between 4,000 and 5,000 BTU/pound are suitable for the fuels blending program due to their "significant organic content". However, these waste streams will not be widely accepted at the facility due to the BTU/pound restrictions at the BIF units. Typically, the BIF units require minimum heat contents of 10,000 BTU/pound for liquid waste.

Thank you for your time and consideration of this matter. If you have questions or require further information, please call me at (318) 783-2624.

Sincerely,

James W. Hathcock  
Environmental Manager

Enclosure: cc: Mr. Stan Burger (USEPA, Region VI), Mr. Frank Behan (USEPA), Mr. Lin Longshore, Mr. Joseph Webb, Jr., Mr. Glenn Miller (LA-DEQ)

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Attachments

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TABLE 1  
LAIDLAW ENVIRONMENTAL SERVICES (RECOVERY), INC.,  
CROWLEY, LOUISIANA  
EPA I.D. #LAD 079 464 095

Description of Fuel Type Materials

TCLP Waste  
D001

D003

RO 11883

D018

RO 11883

D019

RO 11883

D021

RO 11883

D022

RO 11883

D023

RO 11883

D024

RO 11883

D025

RO 11883

D026

RO 11883

D027

RO 11883

D028

RO 11883

D029

RO 11883

D030

RO 11883

D032

RO 11883

D033

RO 11883

D034

RO 11883

D035

RO 11883

D036

RO 11883

D037

RO 11883

D039

RO 11883

D040

RO 11883

D041

RO 11883

D042

RO 11883

D043

RO 11883

Listed Hazardous Waste  
F001

RO 11883

F002

RO 11883

F003

RO 11883

F004

RO 11883

F005

RO 11883

F023

RO 11883

F024

RO 11883

F025

RO 11883

F032

RO 11883

F034

RO 11883

F037

RO 11883

F038

RO 11883

F039

RO 11883

K001

RO 11883

K009

RO 11883

K010

RO 11883

K011

RO 11883

K013

RO 11883

K014

RO 11883

K015

RO 11883

K016

RO 11883

K017

RO 11883

K018

RO 11883

K019

RO 11883

K020

RO 11883

K021

RO 11883

K022

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K023

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K024

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K025

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K027

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K029

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K030

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K048

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K049

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K050

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K051

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K052

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K060

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K083

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K085

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K086

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K087

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K093

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K094

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K095

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K103

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P100

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P101

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P102

RO 11883

P103

RO 11883

P109

RO 11883

P110

RO 11883

P111

RO 11883

P112

RO 11883

P116

RO 11883

P117

RO 11883

P118

RO 11883

P123

RO 11883

Listed Hazardous Waste  
U001

RO 11883

U002

RO 11883

U003

RO 11883

U004

RO 11883

U005

RO 11883

U006

RO 11883

U007

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U008

RO 11883

U009

RO 11883

U010

RO 11883

U011

RO 11883

U012

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U013

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U014

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U015

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## ATTACHMENT A

### ADDITIONAL ACCEPTANCE CRITERIA FOR LOW-BTU WASTE

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#### ADDITIONAL ACCEPTANCE CRITERIA FOR LOW-BTU WASTE

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The hazardous waste primary constituent(s) must be a hazardous waste code listed on Table 1. These hazardous waste have significant organic content to be utilized as fuel. In addition, the land disposal treatment standard for most of the hazardous waste codes is incineration or fuel blending.

The characteristic waste codes listed on Table 2 may be found in the waste, but only as a secondary constituent (<5%). These characteristic codes are often associated with paint, resin and oily waste.

The waste must have a heating value >4,000 BTU/pound, as generated. The establishment of a heating value of 4,000 BTU/pound as the minimum insures the waste has significant usable energy prior to acceptance for fuel blending.

Metal bearing waste will not be accepted for fuel blending. Therefore, the metal bearing waste codes listed on Table 3 will not be accepted for fuel blending, unless they are included as trace constituents (<1%). Tank bottoms from incinerators and storage facilities often have metal bearing waste codes associated with the waste stream. In most cases, the waste has significant organic content, as generated during the tank cleaning process. Therefore, waste streams with hazardous waste codes listed in Table 3, which are generated from cleaning of tanks, can be accepted for fuel blending. Other waste streams containing metal bearing waste will not be accepted for fuel blending.

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#### TABLE 2

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##### Description of Secondary Constituents

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D002 D004 D005 D006 D007 D008 D009  
D010 D011 D012 D013 D014 D015 D016  
D017 D020 D031 D038

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TABLE 3  
Description of Metal-Bearing Waste Codes

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F006 F007 F008 F009 F010 F011 F012  
F019

K002 K003 K004 K005 K006 K007 K008  
K061 K069 K071 K100 K106

P010 P011 P012 P013 P015 P029 P074  
P087 P099 P104 P113 P114 P115 P119  
P120 P121 P122

U032 U145 U151 U204 U205 U216 U217